



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 21 82 16 10

Classification of the application (IPC):

H04N 21/235, H04N 5/77, H04N 5/92, H04N 21/2668, G06F 16/583, G10L 13/08, H04N 1/00, H04N 1/32, H04N 21/4223, H04N 21/4227, H04N 21/81, H04N 21/234, H04N 21/239, H04N 21/2343, H04N 21/472, H04N 21/482

Technical fields searched (IPC):

G06F, G10L, H04N

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y	US 2017272583 A1 (KASA MASANORI [JP] ET AL) 21 September 2017 (2017-09-21) * abstract * * paragraph [0003] - paragraph [0006] * * paragraph [0043] - paragraph [0044] * * paragraph [0217] - paragraph [0220] * * paragraph [0225] - paragraph [0239] * * paragraph [0243] * * paragraph [0250] - paragraph [0255] * * figures 18,19,20 *	1-15
Y	JP 2016123069 A (PANASONIC IP MAN CORP) 07 July 2016 (2016-07-07) * paragraph [0001] * * paragraph [0011] - paragraph [0012] * * paragraph [0017] - paragraph [0023] * * paragraph [0037] * * paragraph [0057] - paragraph [0061] * * paragraph [0068] - paragraph [0070] * * paragraph [0074] * * paragraph [0101] * * paragraph [0105] - paragraph [0110] * * paragraph [0122] * * paragraph [0145] * * paragraph [0156] - paragraph [0157] * * paragraph [0253] - paragraph [0263] * * paragraph [0267] * * paragraph [0281] - paragraph [0289] * * paragraph [0295] - paragraph [0300] *	1-15

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 09 August 2023	Examiner Fantini, Federico
---------------------------	--	-------------------------------

CATEGORY OF CITED DOCUMENTS

- | | |
|---|--|
| X: particularly relevant if taken alone | P: intermediate document |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention |
| A: technological background | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure | D: document cited in the application |
| & : member of the same patent family, corresponding document | L: document cited for other reasons |

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 21 82 16 10

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	US 2006112413 A1 (ANDO MASAKI [JP] ET AL) 25 May 2006 (2006-05-25) * abstract * * paragraph [0008] - paragraph [0010] * * paragraph [0179] - paragraph [0180] * * paragraph [0186] - paragraph [0190] * * paragraph [0213] - paragraph [0219] * * figures 15A,17A,17B,22 *	1-15
A	US 2015124106 A1 (TOMITA HISASHI [JP]) 07 May 2015 (2015-05-07) * abstract * * paragraph [0037] - paragraph [0038] * * paragraph [0044] - paragraph [0045] * * paragraph [0056] * * figures 2,6 *	1-15
A	US 2010088368 A1 (YAMANE TOSHIMIZU [JP] ET AL) 08 April 2010 (2010-04-08) * abstract * * paragraph [0004] - paragraph [0005] * * paragraph [0007] * * paragraph [0038] - paragraph [0039] * * paragraph [0043] - paragraph [0048] * * paragraph [0075] - paragraph [0078] * * figures 1,2 *	1-15

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 09 August 2023	Examiner Fantini, Federico
---------------------------	--	-------------------------------

CATEGORY OF CITED DOCUMENTS

- | | |
|---|--|
| X: particularly relevant if taken alone | P: intermediate document |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention |
| A: technological background | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure | D: document cited in the application |
| & : member of the same patent family, corresponding document | L: document cited for other reasons |

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 21 82 16 10

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	US 2018330204 A1 (KIM WOO-CHAN [KR] ET AL) 15 November 2018 (2018-11-15) * abstract * * paragraph [0167] - paragraph [0170] * * paragraph [0176] - paragraph [0186] * * paragraph [0189] - paragraph [0191] * * paragraph [0195] * * paragraph [0203] - paragraph [0208] * * paragraph [0212] - paragraph [0215] * * paragraph [0251] - paragraph [0252] * * figure 5.6 *	1-15

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 09 August 2023	Examiner Fantini, Federico
---------------------------	--	-------------------------------

CATEGORY OF CITED DOCUMENTS

- | | |
|---|--|
| X: particularly relevant if taken alone | P: intermediate document |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention |
| A: technological background | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure | D: document cited in the application |
| & : member of the same patent family, corresponding document | L: document cited for other reasons |

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 21 82 16 10

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 09-08-2023
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2017272583 A1	21-09-2017	CN 106537895 A	22-03-2017
		EP 3182693 A1	21-06-2017
		JP 6308299 B2	11-04-2018
		JP WO2016024432 A1	15-06-2017
		KR 20170041198 A	14-04-2017
		US 2017272583 A1	21-09-2017
		WO 2016024432 A1	18-02-2016
JP 2016123069 A	07-07-2016	JP 6598109 B2	30-10-2019
		JP 6948624 B2	13-10-2021
		JP 2016123069 A	07-07-2016
		JP 2019220994 A	26-12-2019
US 2006112413 A1	25-05-2006	CN 1685718 A	19-10-2005
		JP 4240973 B2	18-03-2009
		JP 2004120329 A	15-04-2004
		KR 20050057440 A	16-06-2005
		US 2006112413 A1	25-05-2006
		WO 2004030357 A1	08-04-2004
US 2015124106 A1	07-05-2015	JP 2015090553 A	11-05-2015
		US 2015124106 A1	07-05-2015
US 2010088368 A1	08-04-2010	JP 2010093342 A	22-04-2010
		US 2010088368 A1	08-04-2010
US 2018330204 A1	15-11-2018	CN 108292311 A	17-07-2018
		EP 3343399 A1	04-07-2018
		KR 20170055254 A	19-05-2017
		KR 20230095895 A	29-06-2023
		US 2018330204 A1	15-11-2018
		US 2019197365 A1	27-06-2019
		US 2019279050 A1	12-09-2019
		US 2020134397 A1	30-04-2020
		WO 2017082630 A1	18-05-2017